

Morphix Technologies - Chameleon



GENERAL DESCRIPTION:

The Chameleon is a hands-free, power-free chemical detection for gases and vapors in air. The Chameleon consists of an armband and disposable chemical detecting cassettes. The armband holds up to ten chemical cassettes to detect ten different chemicals or families of chemicals. The Chameleon is easy to use and provides a clear color change on half the sensor if the targeted chemical is present. The Chameleon has been successfully third party tested and is designed for use in a wide variety of operating environments including desert, arctic and tropic. The Chameleon can even be immersed in salt and fresh water for an hour under pressure. It is very rugged and accurate.



TECHNICAL DESCRIPTION:

The Chameleon utilizes sensitive, selective, low-cost, easy to use colorimetric chemistry sensors. The design of the Chameleon cassette allows the Chameleon to be completely water resistant and usable in a wide range of harsh environmental conditions.

CONTACT INFORMATION

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COST

- \$60/system
- \$3/analysis

Tier Selection

Final tier assignment is based on overall product score.

- Top Tier
- ◐ Second Tier
- Third Tier
- ◑ Fourth Tier
- Bottom Tier

RANKINGS

	Biological	Chemical	Radiological
FIELD USE System	N/A	○	N/A
MOBILE Laboratory	N/A	◐	N/A
DIAGNOSTIC Laboratory	N/A	○	N/A
ANALYTICAL Laboratory	N/A	◐	N/A

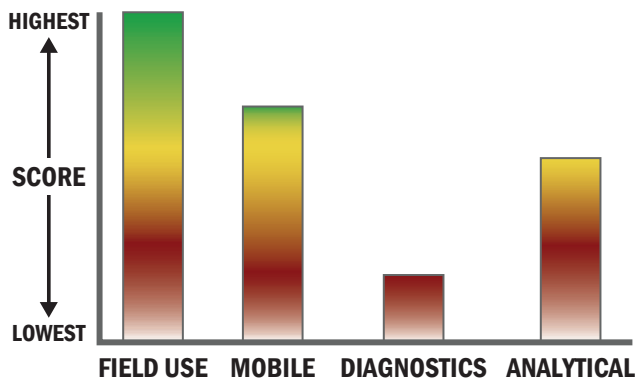
Survey Source

Vendor Supplied Information



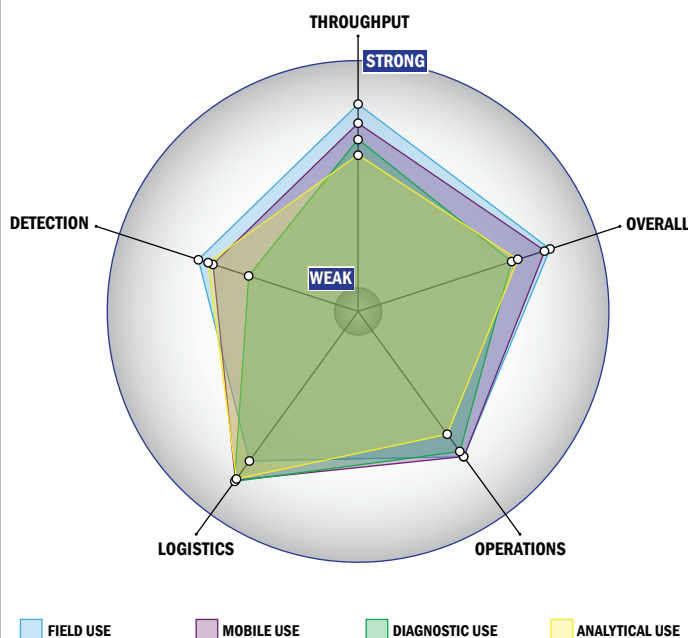
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



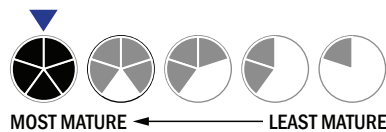
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- 1 sample, >10 tests/sample per run
- Less than 32 samples every 2 hours
- The system or device is currently fully automated
- Device or system is designed for a single use
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- Less than 5 minutes is required for set-up
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a soda can
- Less than 1 kg
- This system is not capable of transmitting data
- There is no electrical requirement



Operations:

- Can be used from -21°C to 42°C (All temperatures)
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- Results can be viewed in real-time
- The system could be adapted to a fully autonomous system with some effort
- The system does not employ any software

Detection:

- Less than $10\ \mu\text{L}$
- Excellent specificity. System has occasional false alarms under certain conditions ($<2\%$)
- 1×10^{-6} - $3 \times 10^{-5}\ \text{mg}/\text{m}^3$
- 1 ppb - 1 ppm
- Possible system could identify aerosolized chemical agent
- System currently can identify liquid chemical agent